

# HELMET WITH VENTILATION

## BACKGROUND OF THE INVENTION

### (a) Field of the Invention

The present invention is related to a helmet with ventilation,  
5 and more particularly to one that expels the hot air inside the  
helmet to admit fresh air into the helmet for the comfort of its  
wearer.

### (b) Description of the Prior Art:

Either the full or the half bubble, two air inlets 101 are  
10 provided at the bubble 10 of the helmet as illustrated in Fig. 10 of  
the accompanying drawings, a lid 102 allowing free lateral  
movement is each provided to open up or close up the air inlets  
101, and two through holes respectively aligned to those two air  
inlets 101 are provided in front of the inner lining of the helmet  
15 to admit the cooler air into the helmet through the air inlets 101  
and the through holes against the wind while the wearer is riding  
his/her motorcycle.

However, the amount of air admitted through both air inlets  
101 is very limited, and the through holes inside the helmet is  
20 located at where close to the forehead of the rider, so that once the  
inner wall of the helmet is further covered by a layer of sponge,  
those air inlets 101 and through holes fail to sufficiently expel the  
hotter air inside the helmet or supply enough cooler air to the  
peripheral of the head of the rider. The rider still feels  
25 uncomfortable due to the stagnation of hotter air inside the

helmet.

## **SUMMARY OF THE INVENTION**

The primary purpose of the present invention is to provide a helmet with ventilation to allow massive hotter air expel and  
5 cooler air admission. To achieve the purpose, a slot type of air inlet allowing free control of massive air inlet amount is provided on the bubble of the helmet, and passage is provided in the lining of the helmet.

Wherein, multiple slot air inlets are provided on the bubble of  
10 the helmet at where close to the forehead of a rider, and connected through a circular air passage provided to the peripheral of the lining of the helmet; multiple air expel holes connecting through the interior of the helmet are provided to the air passage; an air outlet is provided on the rear of the bubble of the helmet; an air  
15 inlet lid is provided to cover the air inlets, and an air inlet gate allowing free elevation is provided between the air inlet lid and the air inlets.

Another purpose of the present invention is to provide a helmet with ventilation that is adaptable to a full or half bubble  
20 type of a helmet.

## **BRIEF DESCRIPTION OF THE DRAWINGS**

Fig. 1 is an exploded view of a preferred embodiment of the present invention applied to a full bubble type of helmet.

Figs. 2 is a sectional view of the preferred embodiment of the  
25 present invention applied to a full bubble type of helmet.

Fig. 3 is a perspective view of the preferred embodiment of the present invention applied to a full bubble type of helmet.

Fig. 4 is a schematic view showing that an air inlet gate of the preferred embodiment of the present invention is closed up.

5 Fig. 5 is a schematic view showing that the air inlet gate of the preferred embodiment of the present invention is opened up.

Fig. 6 is a sectional view of another preferred embodiment of the present invention applied to a full bubble type of helmet.

Fig. 7 is a perspective view of another preferred embodiment  
10 of the present invention applied to a full bubble type of helmet.

Fig. 8 is a sectional view of a preferred embodiment of the present invention applied to a half bubble type of helmet.

Fig. 9 is a perspective view of the preferred embodiment of the present invention applied to a half bubble type of helmet.

15 Fig. 10 is a schematic view showing a ventilation structure of the prior art of the present invention.

### **DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS**

The present invention is related to a helmet with ventilation essentially comprised of a helmet 1, an air inlet lid 2 and an air  
20 inlet gate 3. Wherein, as illustrated in Figs. 1 and 2, the helmet 1 includes a full bubble 11 and an inner lining 12. A window 13 is provided on the front of the bubble, a front guard strip 18 is provided at the lower end of the window 13, and an arc visor 14 permitting free lift as desired is hinged to the window 13. In a  
25 preferred embodiment of the present invention, multiple slot air inlets 15 are provided at where selected on the front bubble 11

close to the forehead of the rider, a circular air passage 16 is provided to the peripheral of the inner lining 12 and the front of the circular air passage 16 is connected through those air inlets 15. Multiple air expel holes 161 are provided to the air passage 16 that are connected through the interior of the helmet, and an air outlet 17 is provided on the rear of the bubble 11 to connect through the rear end of the circular air passage 16 so to admit the cooler air outside the helmet to flow through those slot air inlets 15, the air passage 16 and those air expel holes 161 into the interior of the helmet while the hotter air inside the helmet flows through those air expel holes 161, the air passage 16 and the air outlet 17 into the air.

The air inlet lid 2 made in a “ $\Gamma$ ” shape as illustrated in Fig. 1 is provide to cover up those slot air inlets 15 on the front bubble 11 of the helmet and multiple slot ventilation holes 21 are provided on the surface of the air inlet lid 2 with its upper edge as an open end to be inserted with the air inlet gate 3.

The air inlet gate 3 as illustrated in Fig. 1 is provided for the control of the opening or shutting of those slot air inlets 15 on the bubble 11 of the helmet. Multiple slot ventilation holes 31 are provided on the air inlet gate 3 to define a retainer 32 between any two abutted slot ventilation holes 31, and a dialer 33 is provided at the top of the air inlet gate 3.

When assembled as illustrated in Figs. 2 and 3, the air inlet lid 2 covers and is secured on the outside of those slot air inlets 15 on the bubble 11 of the helmet while the air inlet gate 3 is inserted from the top of the air inlet lid 2 into where between the air inlet

lid 2 and those slot air inlets 15 on the bubble 11 of the helmet for the air inlet gate 3 to control the opening or shutting of those slot air inlets 15. Consequently, the cooler air is admitted through the air inlet lid 2, the air inlet gate 3, those slot air inlets 15 and the  
5 air passage 16 into the helmet, and the hotter air inside the helmet is expelled from the air outlet 17 at the rear of the bubble 11 of the helmet.

The rider may decide whether to admit the cooler air into the helmet. In case of a bitter cold or the air quality is poor, the rider  
10 may press down the air inlet gate 3 as illustrated in Fig. 4 for the retainers 32 to stop or cover up the air at where between those slot air inlets 15 on the bubble 11 and those slot ventilation holes 21 on the air inlet lid 2 so to prevent the cold air or contaminated air from entering into the helmet while the hotter air remains to be  
15 expelled into the air through those air expel holes 161, the air passage 16 and the air outlet 17 at the rear of the bubble 11 of the helmet. If the cooler air is desired to be admitted into the helmet, the air inlet gate 3 is lifted up for those retainers 32 to depart from where between those slot air inlets 15 and those slot ventilation  
20 holes 21 as illustrated in Fig. 5, so that by taking advantage of being against the wind while riding, the air outside the helmet is admitted into the helmet through those slot ventilation holes 21, 31, those slot air inlets 15, the air passage 16 and those air expel holes 161 while the hotter air remains to be expelled into the air  
25 through those air expel holes 161, the air passage 16 and the air outlet 17 at the rear of the bubble 11 of the helmet.

The present invention allows the control whether to admit

massive air into the helmet or not, thus to provide the optimal comforts to the rider. When the air is not permitted to enter into the helmet, the hotter air remains to be expelled out of the helmet. The design of the circular air passage 16 not only retains the structural strength of the helmet but also provides the balanced  
5 benefits of wearing comforts and safety of the helmet.

It should be noted that in the present invention, the helmet 1 is not limited to the full bubble 11, i.e. a bubble provided with a front guard strip 18 and an inner lining 12; it can be also related  
10 to a full bubble 11A adapted with an inner lining 12A without the front guard strip 18 as illustrated in Figs. 6 and 7, or related to a half bubble 11B adapted with an inner lining 12B as illustrated in Figs. 8 and 9 characterized by the same multiple slot air inlets 15, the air passage 16, multiple air expel holes 161, the air outlet 17,  
15 the air inlet lid 2 and the air inlet gate 3. Furthermore, those slot air inlets 15, and those slot ventilation holes 21, 31 are not limited to the shape of slot; and they may be provided in the form of multiple round holes or holes in any other shape for the assembly of a helmet provided with ventilation to achieve the optimal  
20 ventilation and comforts for the rider.